

L-37 Surveillance Panel Teleconference Minutes
Wednesday 09/10/2008

Attendees:

Dana -	Basset, Miller, Fett, Guzikowski
SwRI -	Koehler, Lochte, Jackson
Lubrizol -	Bartlett, Gropp, Graziano
Afton -	Koglin, Hyguchi
Park -	Smith
TMC -	Lind
WT Sullivan Inc.	Sullivan

L-37 Surveillance Panel teleconference call was directed to convene at this time by the Panel at its September 4th teleconference meeting to review testing options and progress to date.

Agenda:

- Approve the September 4, 2008 SP teleconference meeting minutes.
- Review pending action items.
- Review the SwRI modified test condition matrix information.
- Review the updated industry acceptance targets for Gear Batch P4L792/V1L417 hardware.

Approval of Minutes

Motion #1: Mr. Koehler motioned/Second Mr Koglin. – That the September 4, 2008 meeting minutes be approved as written. Motion passed unanimously with a vote count of 7-0-0.

Retrofit Lubrited Hardware – Review and Discussion

Prior Action Item Review & Update:

- **Ramsey/Schmalbach**– Mr. Ramsey to work with chairman to address a Dana refund to the industry labs since the hardware has already been paid for. We are short 32 units. Learned on September 10th that Gary Schmalbach was assigned the task. **Open**
- **Miller** – Discussions with Mr. Brazeau, director of engineering from Dana, is evaluating the option of contracting with Mr. Okamuro to be brought on as a consultant. Miller reported on September 10th that it was his understanding that Dana is one signature away from having Ken come on board and should happen by the end of the week **Open.**
- **Dana/Fett/Guzikowski/Miller** – Dana to perform some mag particle inspection on test gears to determine if stress fractures are occurring. Is this occurring on the unbroken gears? On September 10th Miller reported that he has looked at two evaluations (one with broken teeth, one no broken teeth) from the non-lubrited batch, standard test, both exhibiting fracture cracks. Fett reported that he has used a stereo-microscope; on the lubrited hardware, there are cracks on the toe end teeth and some parallel and horizontal crushing cracks. Koglin asked if there was any value looking at hardware pre test? Basset reported that he has looked at production hardware and found no evidence of fracture cracks. **Open.**

- **Miller** – Bartlett asked about the whereabouts of the Okamuro (retired) documentation book that was passed on to Kreinbring, who recently retired. Miller believes he has it and will confirm. **Open.**

- **Dana/Afton/Fett/Miller** – see SP meeting minutes August 13, Action item # 2 – Afton received 6 axles with the new build patterns (L2/3F+2). Afton has completed and posted results for two runs on TMC 153-1. Upon review of the data consensus was that the modified build pattern is not doing the job either. During the September 4th Panel teleconference consensus was for Fett and Miller to confirm if there is some other build option to explore. **Open.**

- **Dana/Labs** - At the September 4 panel teleconference call the labs were directed to convene and draft a letter to Dana representatives specific to laboratory questions and issues. The labs teleconferenced on September 4, drafted and sent the letter to Dana representatives Brazeau, Miller, Ramsey, Fett and Guzikowski. Letter was also included as attachment # 2 of the September 4 panel meeting minutes. Dana was asked to respond to the questions by September 18th panel teleconference meeting. **Open**

- **Dana/SwRI**– See SP meeting minutes August 13, Action item # 3. SwRI received 10 axles with standard build pattern and was to initially conduct two runs on TMC 153-1 with modified test conditions:
 - Actual test conditions are:
 1. **Gear Conditioning Phase** will be conducted per the Standard, no change.
 2. **Gear Test Phase** - Test conditions will be:
 - 80 wheel rpm and 1441 lbf-ft torque per wheel.
 - Axle oil temperature will be the same as a standard test.
 - Test length will be 70 hours of on-test time.
 - Axle will not be modified and no mid test inspections will be performed.
 - Results to report the results prior to continuing to a second test.
 - Today Koehler reported the following progress on testing with reduced load and varied test lengths.
 - 1st aborted at 8 hours, lost driveshaft U-joint on 153-1. Passing result
 - 2nd, restart on 153-1, to run 70, made 60 hours, pinion bearing fail, extreme pitting/spalling.
 - 3rd, restart on 153-1, modified axle, 24 hrs, 8.0 spall, surface cracks
 - 4th, restart on 134, modified axle, 24 hrs, fail rippling
 - 5th, restart on 153-1, modified axle, 24hrs, just EOT, 3 fractured pinion teeth. Note though that the Test was stopped at 7 hours to replace a speed sensor and restarted.

Discussion and Comments:

- **Sullivan** - the poor oil does not have the spitting/spalling that we would typically expect it to have. While a small sample, would have liked it to be worse, discrimination is minimal. If we ignore tooth breakage, there does seem to be some separation.

- **Miller** – it would appear that the 24 hour runs at reduced load for TMC’s 153 and 134 with respect to looking at pitting/spalling purely, there is no case cracking, load distribution looks absolutely correct,(damage occurring all over the pinion). If we are talking about starting a new lot, not sure that we could distribute it across the whole set (more conjugate loading) any better. There is still a risk we could be worse off.
- **Fett** – believes that if we build a new lot we should model after the P4L417 non-lubricated lot. In the current lubricated batch we are seeing sub case fatigue type crushing failures at toe end. Non-lubricated hardware is failing from the top of the tooth corners.
- **Miller** – starting another batch would be great, but, don’t we want to have a significant cause so that the new lot methodology, with respect to stress, would not occur and again have unacceptable matrix testing results?
- **Gropp** – we need a batch of hardware to do oil development, not be caught up in hardware development.

Motion #2: Gropp/Koehler: SwRI run a sixth test with 9 % reduced load on TMC 152-1

- **Vote:**

- Afton, Dana, Intertek-Parc, Lubrizol, SwRI – voted yes
- None opposed
- TMC and Sullivan – voted Abstain
- Final tally, 5-0-2, passed

Attachment # 1 is a summary of all Lubricated Retrofit testing to date. Also, below is the link to the TMC website for the Retrofit lubricated data for everyone’s viewing pleasure. It will be expanded to include all other associated test results as we move forward in our matrix work.

[ftp://ftp.astmtmc.cmu.edu/refdata/gear/l37/data/V1L500_P4L870A_Lubricated Retrofit/](ftp://ftp.astmtmc.cmu.edu/refdata/gear/l37/data/V1L500_P4L870A_Lubricated_Retrofit/)

Chairman’s note: At this point, Ivan Joseph, BP Europe joined us.

- **Sullivan** – stated that he is getting nervous that we nickel and dime this process and months go by and is amplifying Mr. Gropp’s concerns.

Motion #3: Gropp/ Sullivan - The L-37 Surveillance Panel is requesting Dana to immediately begin the process of manufacturing a new batch of ring and pinions to be used in the manufacture of lubricated hardware for use in the L-37 test. This hardware should be manufactured using the same specifications (for metallurgy, hardness, case depth, surface profile, etc.) as was used in the V1L417/P4L792 batch of non-lubricated hardware, and then lubricated using the “alternate” process (per Dana’s recommendation).

All companies who intend to purchase a portion of this batch of hardware are to provide Dana with an initial indication of the size of their order no later than the end of the business day on Friday, September 19. Formal purchase orders are to be provided to Dana no later than the end of the business day on Friday, October 3rd. Dana is to provide the Surveillance Panel with a projected date for the availability of this hardware no later than the end of the business day on Friday, September 26.

Discussion on Motion # 3:

- **TMC** - Nothing is encouraging me, seeing broken teeth, correction factors possibilities.
- **Sullivan** – There is a problem with the non-lubrited inventory too. Maybe we should test the gears before they are lubrited to see the effect. Then, if OK, move forward with lubriting. Maybe we do not even want lubrited hardware as a part of the specification?
- **Vote:**
 - SwRI – voted yes
 - Afton - voted no
 - Dana, Lubrizol, Intertek-Parc, Sullivan and TMC – voted Abstain
 - Final tally, 1-1-5, failed
- **Fett** – If we were to ignore the pitting tooth breakage, there appears to be discrimination on the standard test. So why don't we totally eliminate pitting/spalling requirement and run the rest of the matrix?
- **Lind** - Questions how we put a correction factor on the hardware and allow the fail oil to pass. Does not believe we have discrimination when you look at 153-1.

Motion #4: Gropp/ Sullivan - Based upon the results of extensive testing to date, the L-37 Surveillance Panel has determined that the V1L500/P4L870A batch of lubrited hardware is not suitable for use in the L-37 test procedure. This batch of hardware is hereby rejected.

- **Vote:**
 - Afton, Intertek-Parc, Sullivan, SwRI – voted yes
 - Lubrizol - voted no, chairman commented that he does not have management support to vote no at this point in time. Need answers to laboratory questions.
 - Dana, and TMC – voted abstain
 - Final tally, 4-1-2, passed.

At this point, we will wait to see the response to the laboratory questions of Dana at the Thursday, September 18 Panel teleconference meeting.

Review updated Industry acceptance targets- Gear Batch P4L792/V1L417

Mr. Lind took the panel through a review of the data (see Attachment # 2) by oil code. Remember, the initial targets are the pooled standard deviation of all acceptable oils.

Review of TMC oil 151 - **Motion # 5** - Gropp/Sullivan – motion to accept updated targets as presented with an effective date of September 10, 2008: Motion passed 6-0-1

Review of TMC oil 152 - **Motion # 6** - Gropp/Hyguchi – motion to accept updated targets as presented with an effective date of September 10, 2008: Motion passed 6-0-1

Review of TMC oil 153 – With respect to ridging distress, Mr. Gropp commented that changing/tweaking the target standard deviation to allow values of 10's are of some concern and should not be done. Mr. Lind commented that this lab appears to be rating mild both at their lab and at the workshop.

Motion # 7 - Sullivan/Smith – motion to accept updated targets as presented with an effective date of September 10, 2008. Motion passed 6-0-1

New Lubrited Hardware – Discussion

Continued testing was put on hold until further direction by the panel. Panel direction is that we focus the attention on the retrofit hardware first.

Non- Lubrited Hardware – Discussion

Continued testing was put on hold until further direction by the panel. Panel direction is that we focus the attention on the retrofit hardware first.

o Next Meetings will be a Surveillance Panel Teleconference

- **Teleconference Meeting Thursday, September 18, 2008 at 10:00 a.m. EDT.**
- **Call in info is 608-250-0194, code 324160.**

Meeting adjourned at 12:21 p.m.



Donald T. Bartlett, L-37 SP Chairman

V1L500/P4L870A NEW LUBRITED RETROFIT MATRIX RESULTS

Testkey	Lab	STD	Run	Oil	VAL	Pinbat	DTCOMP	Pwear	Pridg	Pripp	Pspit	Rwear	Rridg	Rripp	Rspit	fpccrat	lpcrat	B/Lash	Mfg. Min	KUSA	COM1
63271	B	191	2658	155	AG	V1L500	20080801	7	9	8	9.5	7	10	10	9.8	0	2	0.005	ASTM-0002		
58906	D	3A	945	155	AG	V1L500	20080805	7	8	10	9.9	8	10	10	9.9	1	2	0.005	ASTM-0007	Broken Tooth	
58912	A	4	225	155	MG	V1L500	20080803	6	9	8	2	8	10	9	9.9	0	2	0.008	ASTM-0009	Broken Teeth	
61857	E	1	912	155	MG	V1L500	20080808	7	9	9	2	7	9	9	9.9	1	2	0.006	ASTM-0016		
63638	B	191	2659	127	AG	V1L500	20080802	6	5	9	9.9	7	6	10	9.9	1	2	0.006	ASTM-0010		
59291	D	3A	944	127	AG	V1L500	20080803	7	8	7	9.9	8	10	10	9.9	1	2	0.005	ASTM-0003	Stand Not Calibrated	
49193	E	1	910	127	LG	V1L500	20080801	7	9	7	9.9	7	9	9	9.9	1	2	0.004	ASTM-0012		
67366	A	4	224	127	AG	V1L500	20080801	7	8	5	9.9	8	9	8	9.9	1	2	0.006	ASTM-0013		
67304	B	191	2662	152-1	AG	V1L500	20080806	7	8	8	2	8	9	10	9.9	0	2	0.005	ASTM-0006	Broken Tooth	
63260	D	3A	946	152-1	MG	V1L500	20080806	7	8	9	2	8	10	9	9.9	1	2	0.005	ASTM-0011		
67385	A	4	227	153-1	AG	V1L500	20080805	7	8	7	3	7	10	10	9.9	0	2	0.005	ASTM-0001		
67314	B	191	2663	153-1	AG	V1L500	20080807	6	5	8	4	6	5	9	9.9	1	2	0.006	ASTM-0014		
64143	D	3A	948	153-1	AG	V1L500	20080811	7	8	9	9.9	8	9	10	9.9	1	2	0.007	ASTM-0015		
63279	E	1	915	153-1	NN	V1L500	20080815	7	9	9	9.9	7	10	9	9.9	0	2	0.006	ASTM-0004	20 HR Test/Cracked Tooth	
63280	E	1	916	153-1	NN	V1L500	20080820	6	8	8	2	6	7	9	9.9	0	2	0.005	ASTM-0008	18 HR Test/Broken Teeth	
64145	D	3A	960	153-1	NN	V1L500	20080827	7	8	8	2	8	10	9	9.9	3	2	0.006	ASTM-0031	Modified Build / Broken Tooth	
67348	D	3A	961	153-1	NN	V1L500	20080903	7	8	7	9.9	8	10	10	9.9	2	2	0.007	ASTM-0035	Modified Build	
64182	A	4	232	153-1	XN	V1L500	20080829	7	9	8	9.9	8	10	10	10	1	2	0.006	ASTM-0021	9% reduced load / 8 hr. test aborted. Shaft U joint failure	
67386	A	4	233	153-1	XN	V1L500	20080901	6	9	8	2	6	9	9	9.9	1	2	0.007	ASTM-0025	9% reduced load / 60 hr. test aborted	
67367	A	4	153-1	NN	V1L500			6	9	8	8	8	10	10	9.9					9% reduced load/24 hr. test	
67367	A	4	134	NN	V1L500			7	9	5	8	8	9	10	9.9					9% reduced load/24 hr. test	

Attachment
 Page
 Reference

1
 1-37
 7/10/08

GEAR BATCH V1L417/P4L792										
UPDATED REFERENCE OIL TEST TARGETS (PINION)										
Reference Oil 151-3			Reference Oil 152			Reference Oil 153				
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	
Wear	25	7.96	0.586	19	8.16	0.565	20	7.60	0.778 *	
Ridging	25	0.166 (9.65)	0.5867	19	0.146 (9.64)	0.5031	20	-0.339 (9.09)	0.3350	
Rippling	25	0.037 (9.54)	0.4141	19	-0.054 (9.44)	0.4795 *	20	-0.580 (8.71)	0.4079	
Spitting	25	0.535 (9.91)	0.0990 *	19	0.541 (9.92)	0.0846 *	20	0.463 (9.87)	0.1335 *	

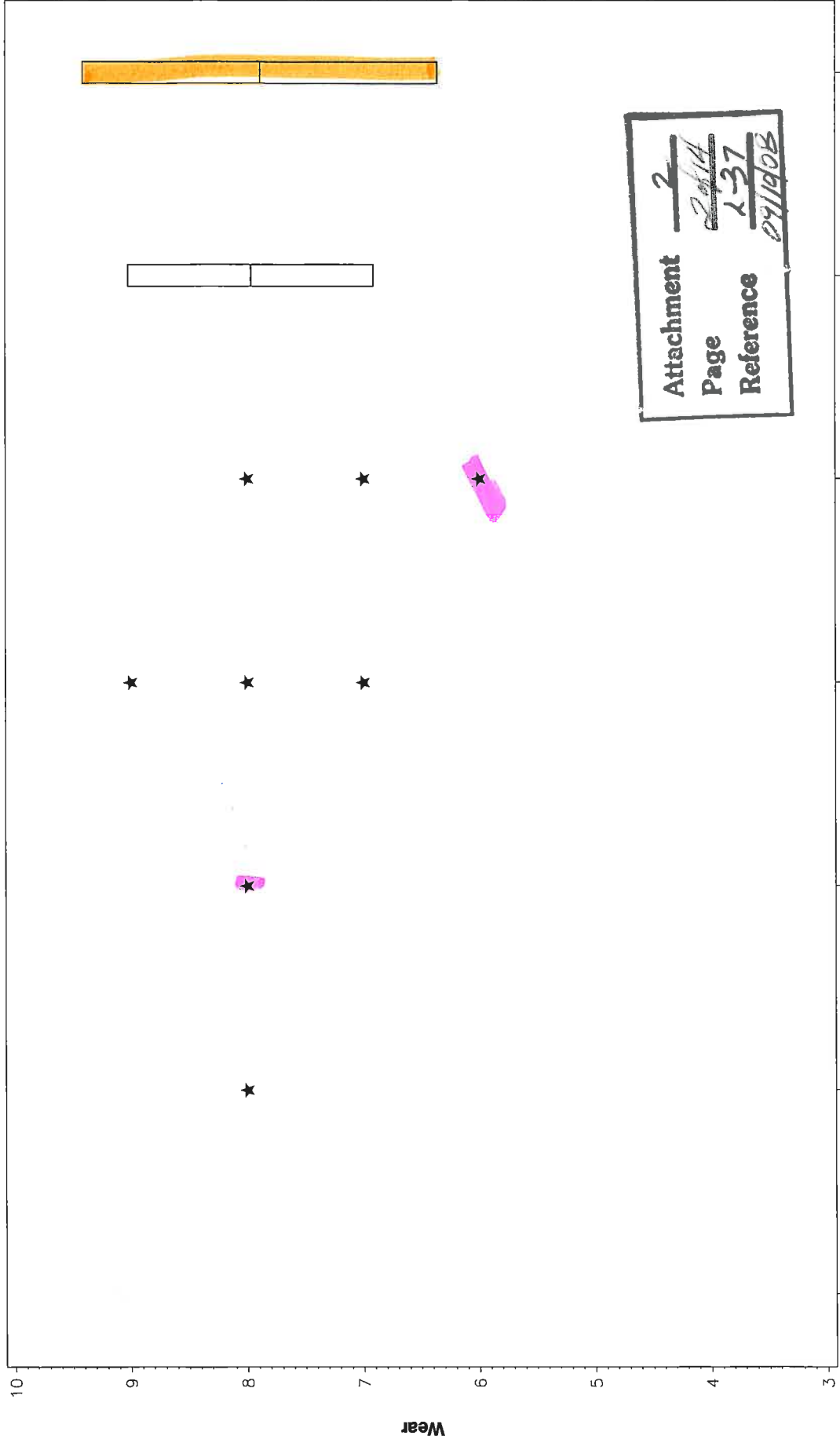
* Adjusted Standard Deviation

GEAR BATCH V1L417/P4L792										
UPDATED REFERENCE OIL TEST TARGETS (RING)										
Reference Oil 151-3			Reference Oil 152			Reference Oil 153				
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	
Wear	25	7.84	0.800	19	7.79	0.713	20	7.55	0.686	
Ridging	25	0.973 (10.0)	1.4000	19	0.635 (9.97)	0.2520	20	0.067 (9.56)	0.6643	
Rippling	25	0.166 (9.65)	0.5602	19	0.319 (9.77)	0.5759	20	0.309 (9.77)	0.5376	
Spitting	25	0.562 (9.93)	0.0835	19	0.570 (9.93)	0.1028	20	0.524 (9.91)	0.1028	

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Reference	1.37
	02/10/15

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 151-3 (Bands Include Merit Ratings of 7, 8, & 9)

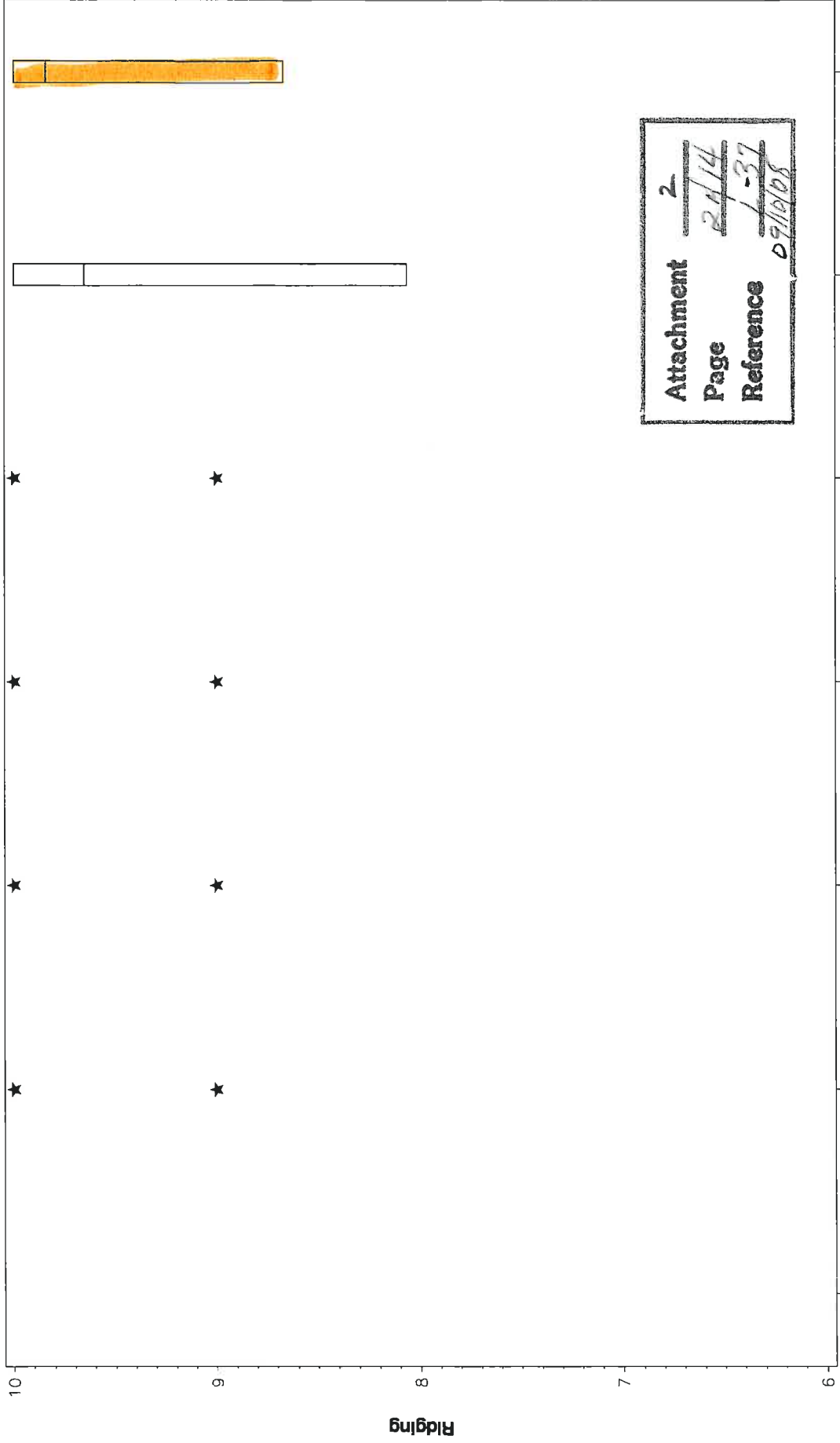
Pinion Wear



Data Group

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 151-3 (Bands Include Merit Ratings of 9 & 10)

Pinion Ridging



Attachment 2
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 Reference L-37
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151-3

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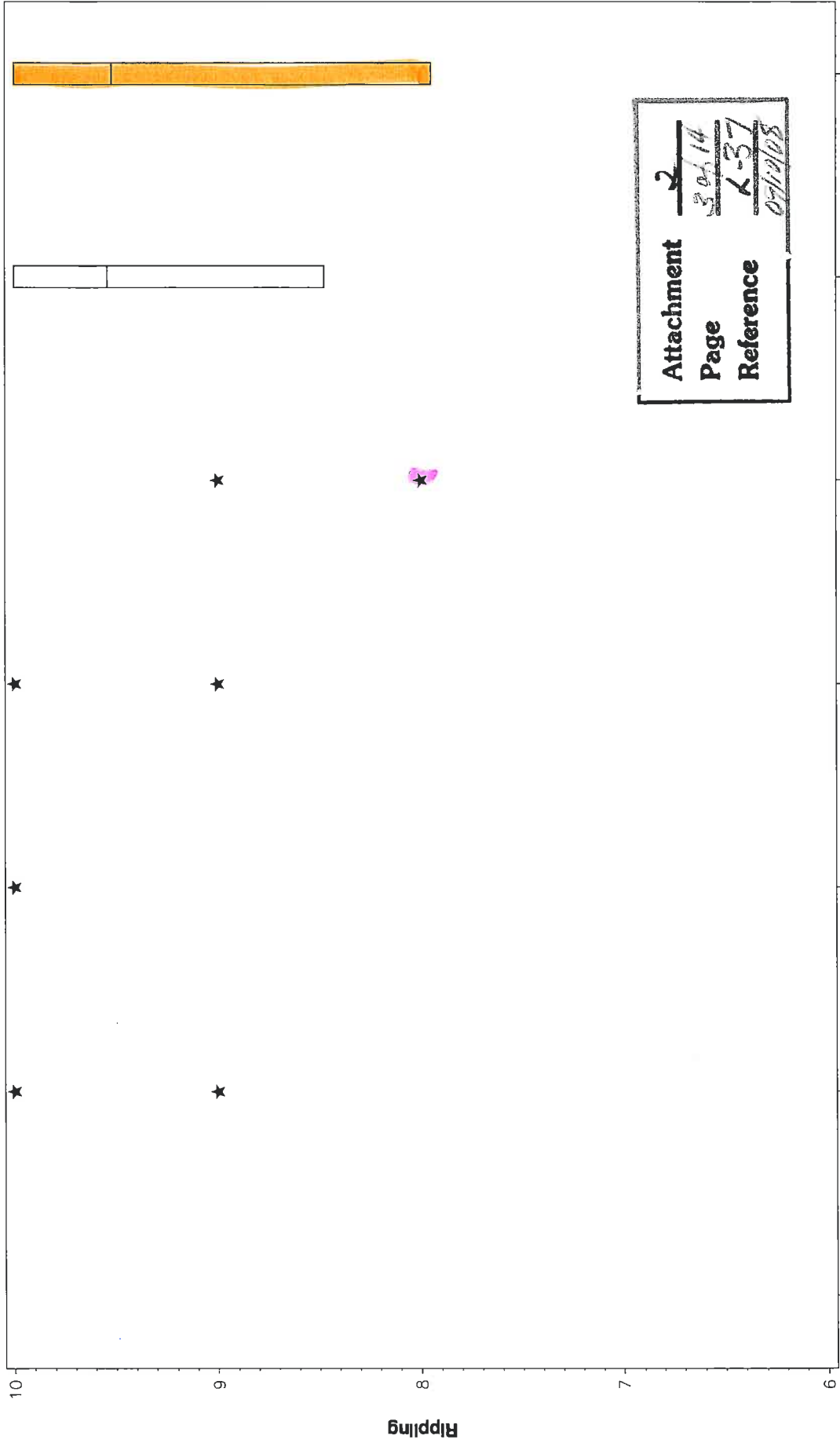
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Data Group

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 151-3 (Bands Include Merit Ratings of 9 & 10)

Pinion Rippling

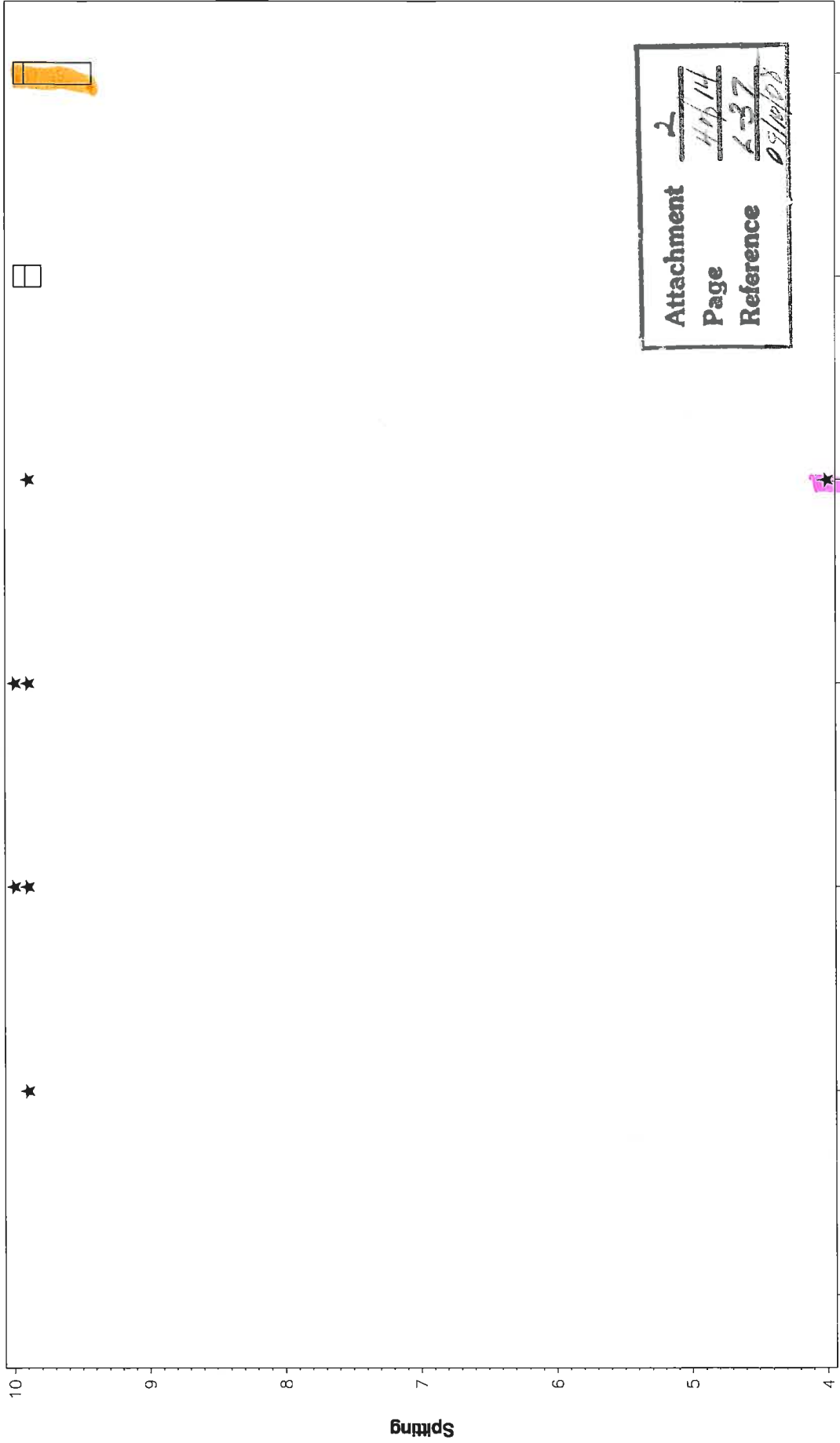


Data Group

Attachment 2
 Page 3 of 14
 Reference L-37
07/10/08

L-37 Lubrified Hardware, Pinion Batch V1L417/P4L792
Updated Test Target Data Set and Shewhart Severity Limits
Reference Oil 151-3 (Bands Include Merit Ratings of 9.8 Thru 10)

Pinion Spitting

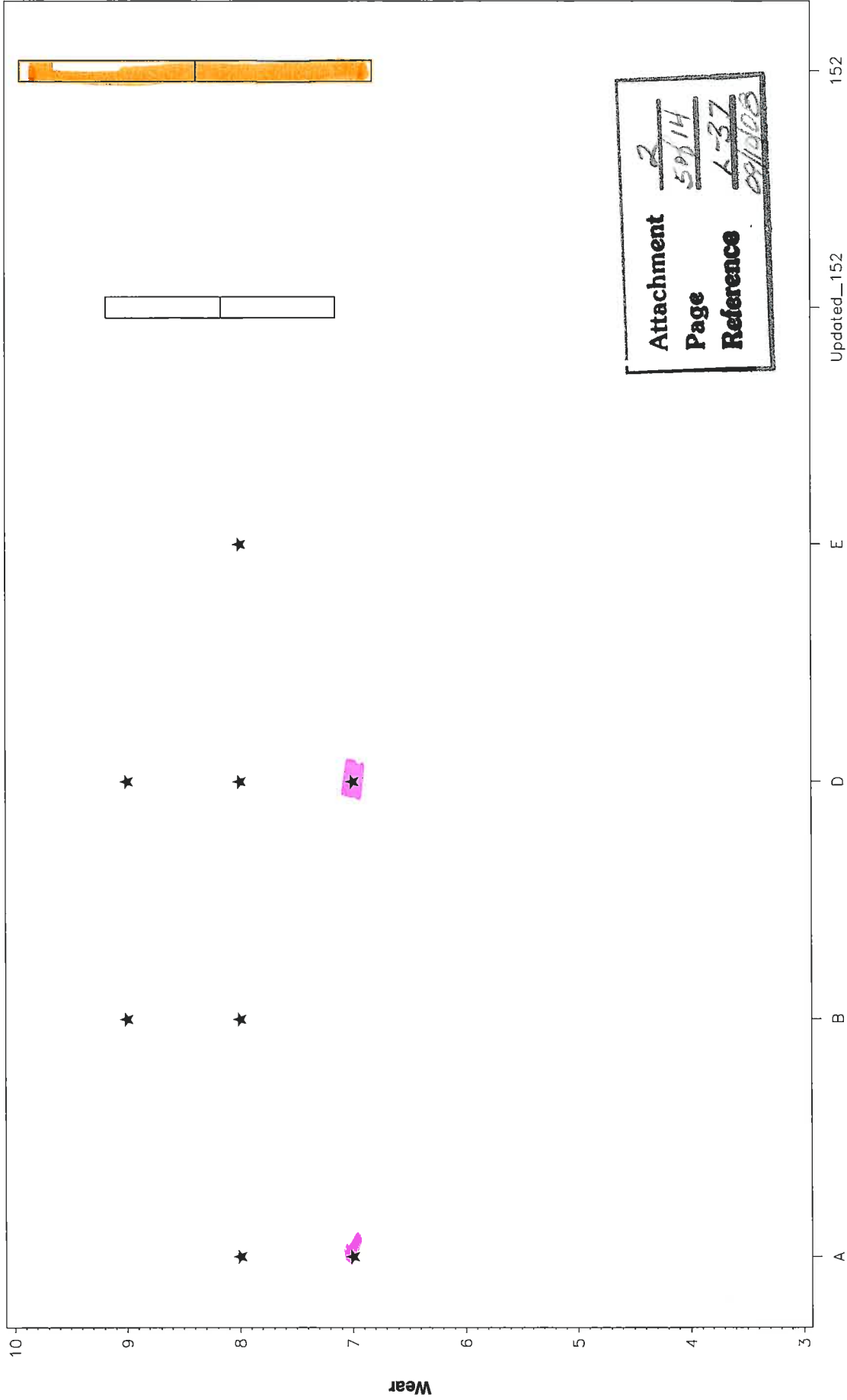


Updated_151-3 151-3

Data Group

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 152 (Bands Include Merit Ratings of 8 & 9)

Pinion Wear



Attachment 2
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152

Updated_152

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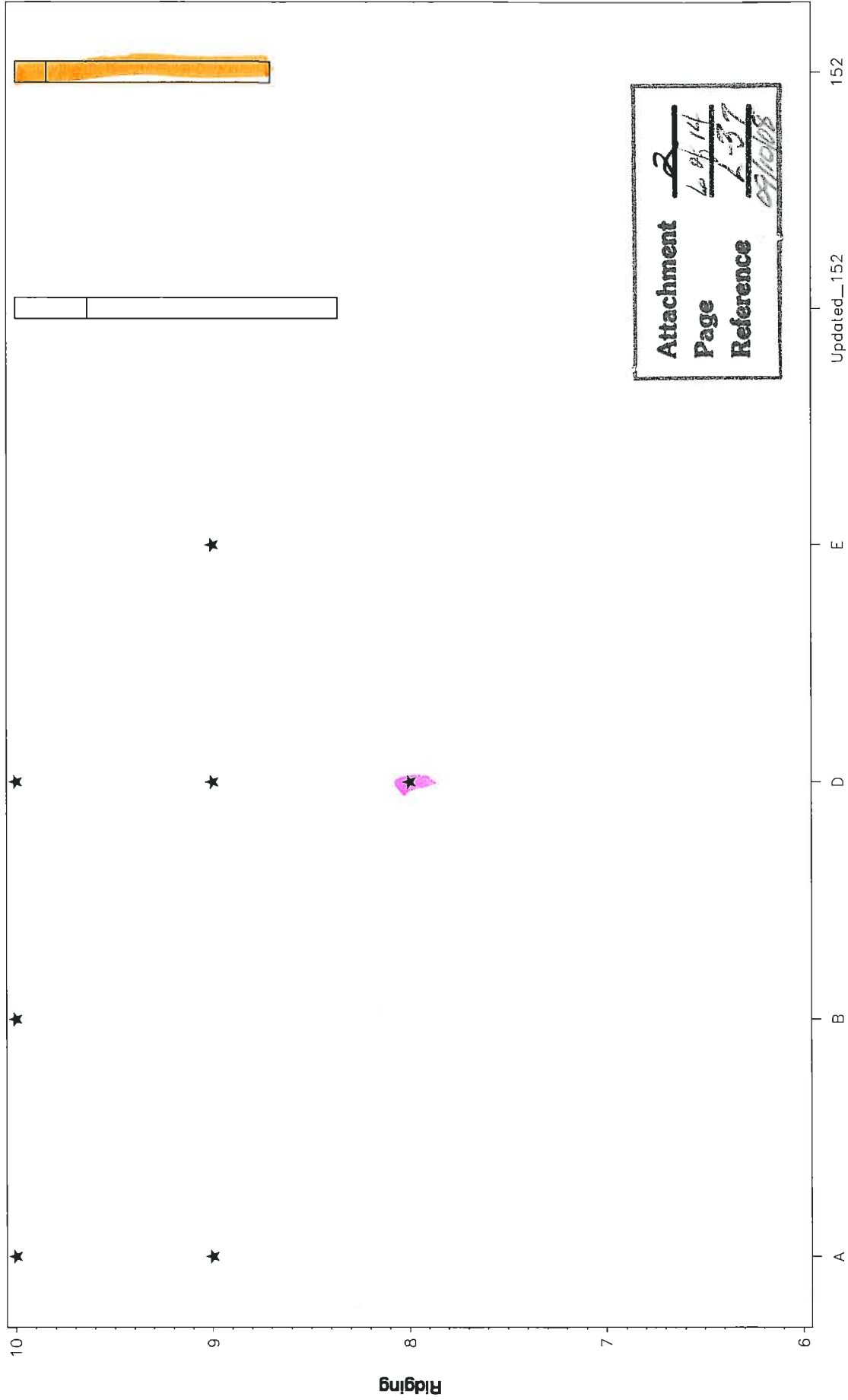
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Data Group

Wear

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
Updated Test Target Data Set and Shewhart Severity Limits
Reference Oil 152 (Bands Include Merit Ratings of 9 & 10)

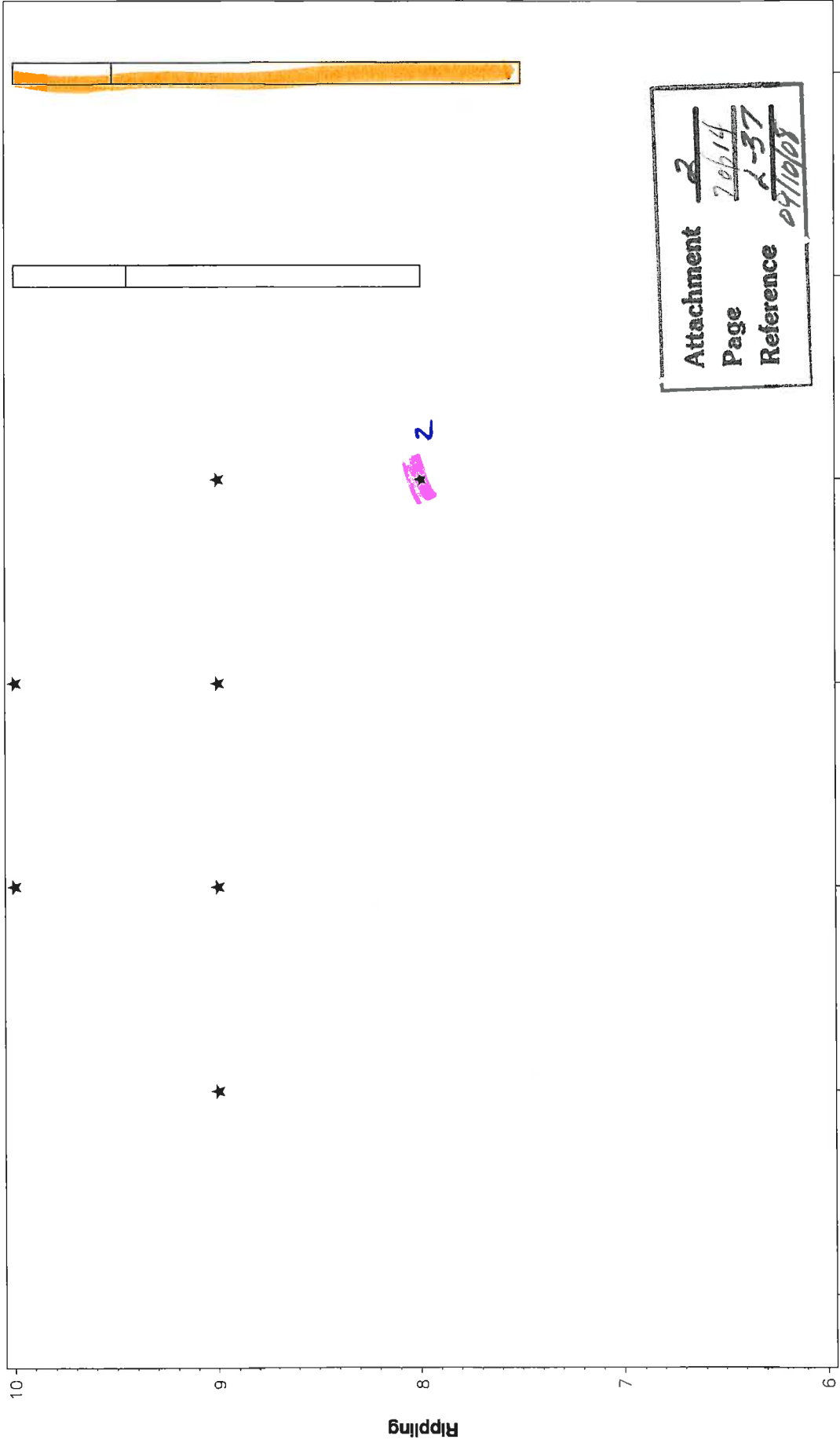
Pinion Ridging



Attachment 2
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Reference L-37
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L-37 Non-lubricated Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 152 (Bands Include Merit Ratings of 8, 9, & 10)

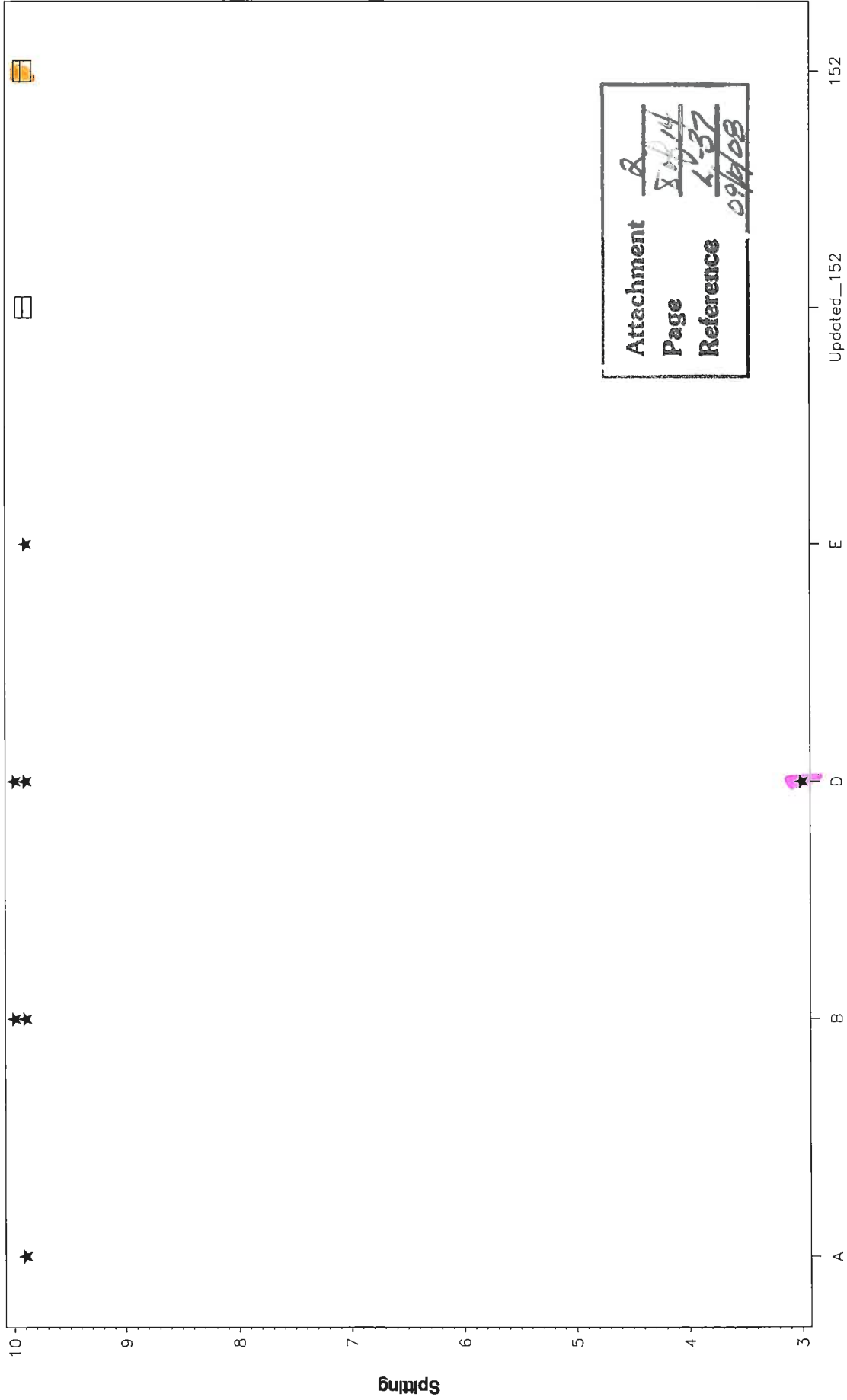
Pinion Rippling



Attachment 2
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L-37 Lubrified Hardware, Pinion Batch V1L417/P4L792
Updated Test Target Data Set and Shewhart Severity Limits
Reference Oil 152 (Bands Include Merit Ratings of 9.9 Thru 10)

Pinion Spitting

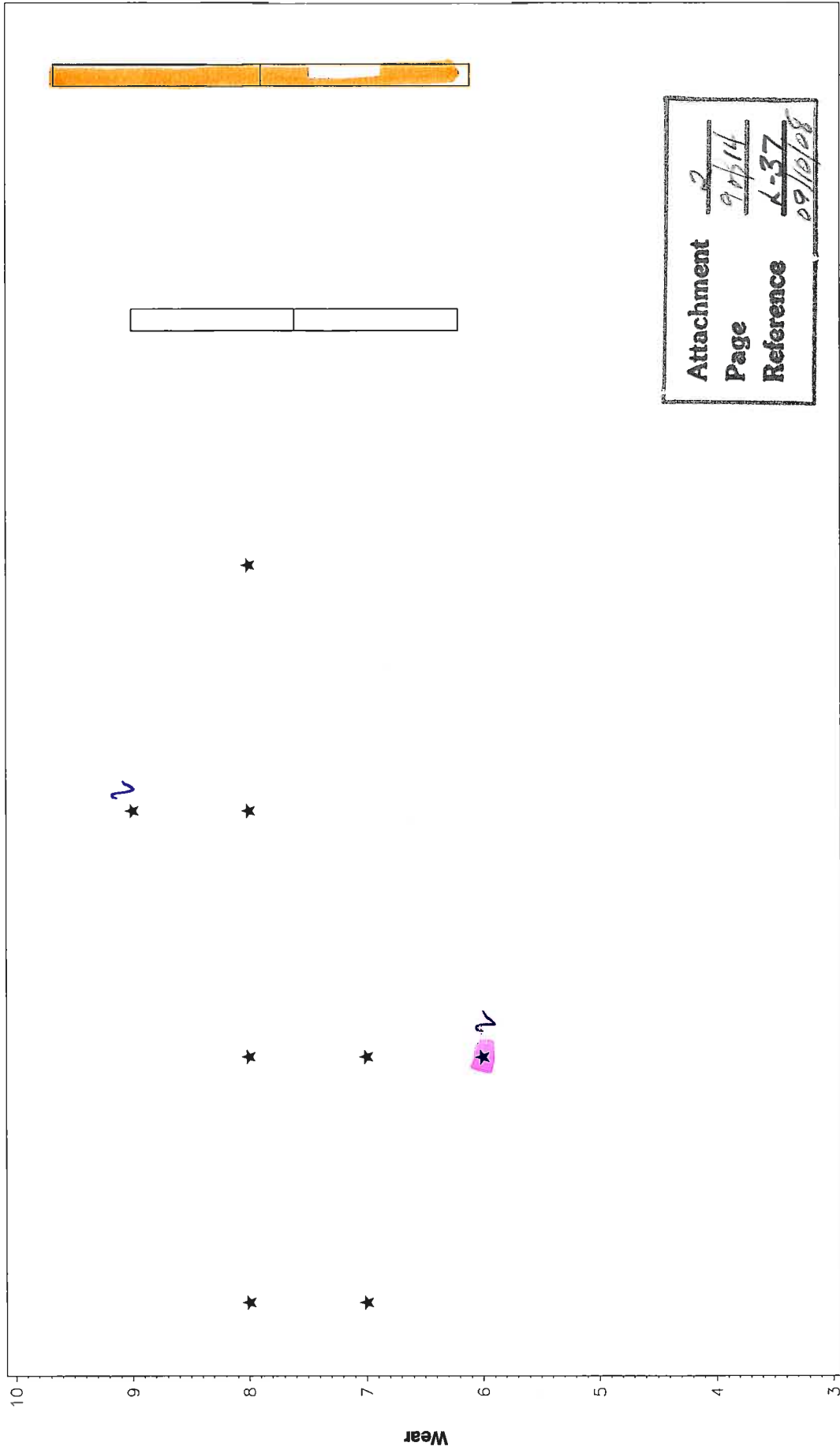


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Data Group

L-37 Non-lubrited Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 153 (Bands Include Merit Ratings of 7, 8, & 9)

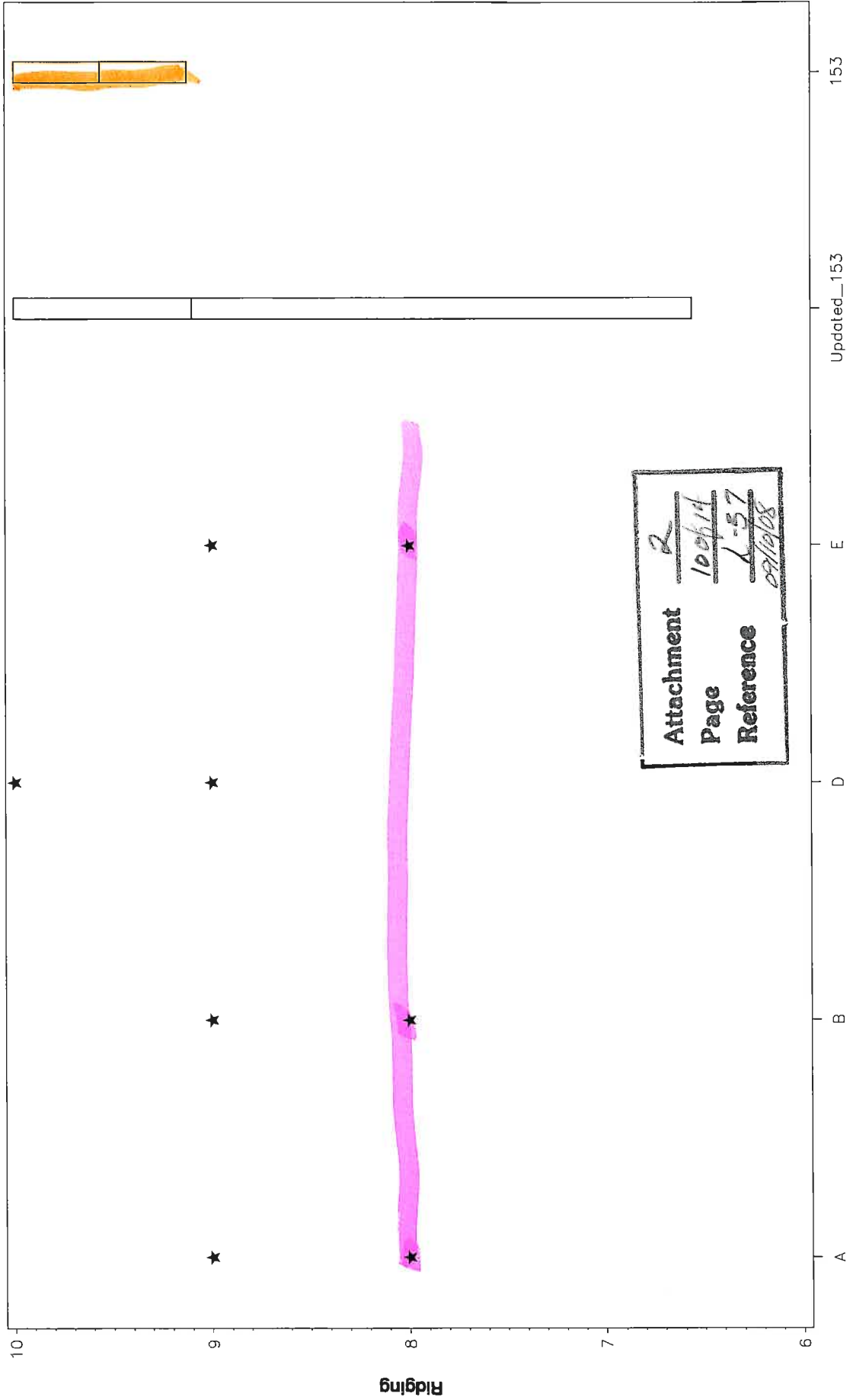
Pinion Wear



Attachment 2
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L-37 Non-lubricated Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 153 (Bands Include Merit Ratings of 7, 8, 9, & 10)

Pinion Ridging



153

Updated_153

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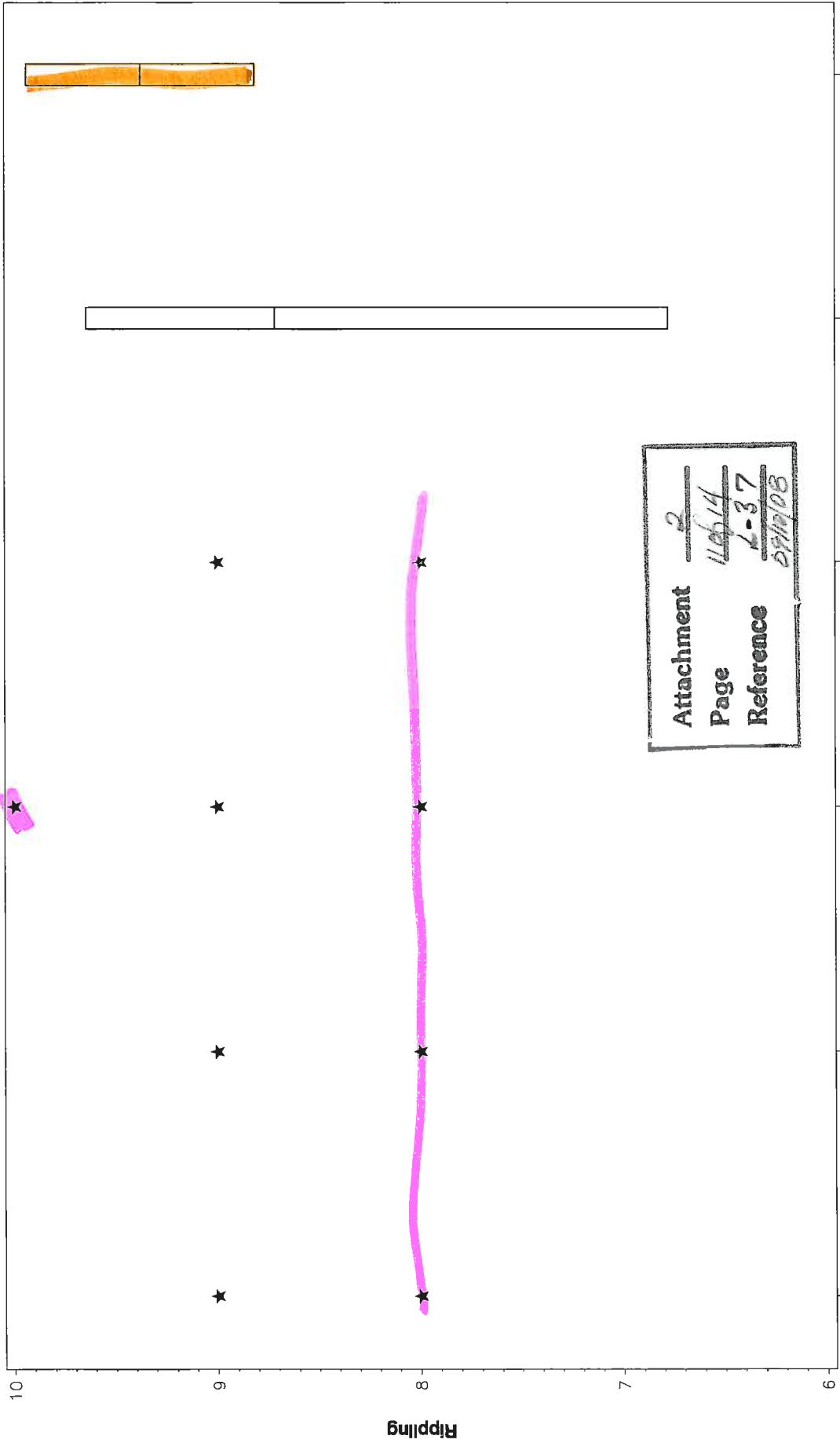
Data Group

Attachment 2
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09/19/08

Ridging

L-37 Non-lubricated Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil 153 (Bands include Merit Ratings of 7, 8, & 9)

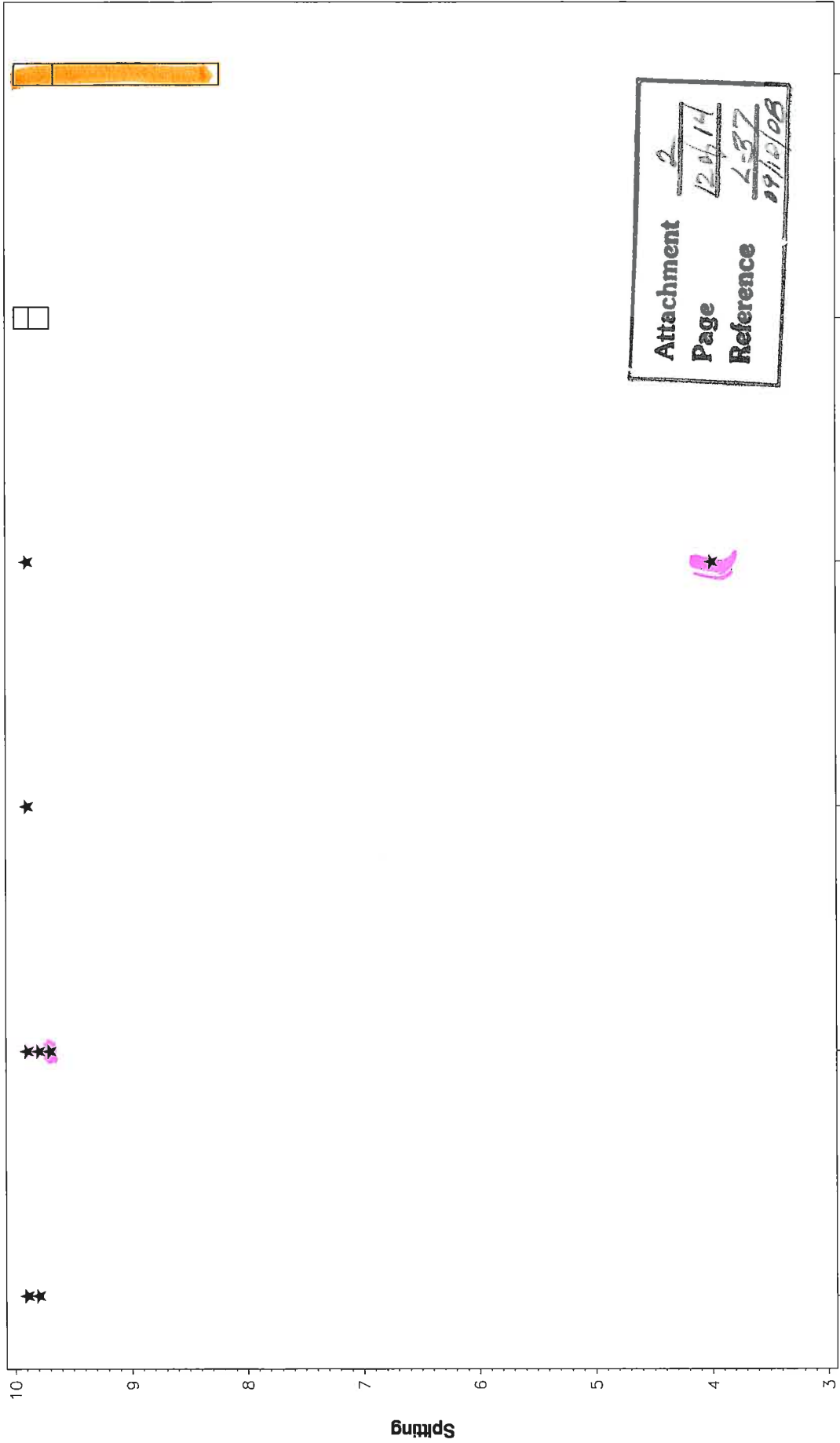
Pinion Rippling



Attachment	2
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Reference	L-37
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L-37 Lubrified Hardware, Pinion Batch V1L417/P4L792
 Updated Test Target Data Set and Shewhart Severity Limits
 Reference Oil #153 (Bands Include Merit Ratings of 9.7 Thru 10)

Pinion Spitting



Attachment 2
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Updated_153 153

V1L417/P7L792 UPDATED REFERENCE OIL TARGETS DATA

TESTKEY	LAB	IND	VAL	PINBAT	DTCOMP	WEAR	RIDG	RIPP	SPIT
53460	PK	151-3	AG	V1L417	20060124	6.0	9.0	8.0	9.9
56556	LZ	151-3	AG	V1L417	20060124	8.0	10.0	10.0	10.0
53444	EV	151-3	AG	V1L417	20060126	9.0	10.0	10.0	9.9
50356	SR	151-3	AG	V1L417	20060128	8.0	10.0	9.0	9.9
56557	LZ	151-3	AG	V1L417	20060325	8.0	10.0	10.0	9.9
55506	PK	151-3	AG	V1L417	20060330	8.0	9.0	8.0	9.9
53445	EV	151-3	AG	V1L417	20060403	8.0	10.0	10.0	10.0
54426	SR	151-3	AG	V1L417	20060412	8.0	10.0	9.0	9.9
55181	EV	151-3	AC	V1L417	20060909	7.0	9.0	10.0	9.9
58297	PK	151-3	AC	V1L417	20061222	8.0	10.0	9.0	9.9
58312	SR	151-3	AC	V1L417	20070531	8.0	10.0	9.0	9.9
58158	EV	151-3	AC	V1L417	20070615	8.0	10.0	10.0	10.0
58286	LZ	151-3	AC	V1L417	20070731	8.0	9.0	10.0	9.9
58159	EV	151-3	AC	V1L417	20070819	8.0	9.0	10.0	10.0
58298	PK	151-3	AC	V1L417	20070919	7.0	10.0	9.0	9.9
58313	SR	151-3	AC	V1L417	20071110	8.0	9.0	10.0	9.9
58287	LZ	151-3	AC	V1L417	20080127	8.0	10.0	10.0	9.9
58161	EV	151-3	AC	V1L417	20080221	9.0	9.0	9.0	9.9
58166	EV	151-3	AC	V1L417	20080512	9.0	9.0	9.0	9.9
65721	SR	151-3	AC	V1L417	20080724	8.0	9.0	9.0	9.9
58299	PK	151-3	OC	V1L417	20080726	8.0	9.0	9.0	4.0
65760	PK	151-3	OC	V1L417	20080730	8.0	10.0	9.0	9.9
65761	PK	151-3	AC	V1L417	20080806	8.0	10.0	9.0	9.9
58163	EV	151-3	OC	V1L417	20080815	8.0	9.0	9.0	9.9
55496	LZ	152	AG	V1L417	20060214	9.0	10.0	10.0	9.9
53557	SR	152	AG	V1L417	20060217	8.0	10.0	9.0	9.9
53558	SR	152	AG	V1L417	20060218	8.0	10.0	9.0	9.9
56536	EV	152	AG	V1L417	20060224	8.0	10.0	10.0	10.0
58301	PK	152	AG	V1L417	20060310	8.0	9.0	8.0	9.9
58289	LZ	152	AG	V1L417	20060330	9.0	10.0	10.0	10.0
58302	PK	152	AG	V1L417	20060331	8.0	9.0	8.0	9.9
58274	EV	152	AG	V1L417	20060405	9.0	10.0	10.0	10.0
58304	PK	152	AC	V1L417	20061223	8.0	9.0	9.0	9.9
58277	EV	152	AC	V1L417	20070403	9.0	9.0	10.0	9.9
59301	LZ	152	AC	V1L417	20070510	8.0	10.0	9.0	9.9
61860	SR	152	AC	V1L417	20070909	7.0	9.0	9.0	9.9
59310	PK	152	AC	V1L417	20080129	8.0	9.0	9.0	9.9
61861	SR	152	AC	V1L417	20080318	8.0	9.0	9.0	9.9
63266	LZ	152	AC	V1L417	20070919	9.0	10.0	10.0	9.9
61850	EV	152	AC	V1L417	20071024	8.0	9.0	9.0	9.9
65764	LZ	152	AC	V1L417	20080328	8.0	10.0	10.0	9.9
61851	EV	152	OC	V1L417	20080501	7.0	8.0	9.0	3.0
63259	EV	152	AC	V1L417	20080703	8.0	10.0	9.0	9.9

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TESTKEY	LAB	IND	VAL	PINBAT	DTCOMP	WEAR	RIDG	RIPP	SPIT
55498	LZ	153	AG	V1L417	20060217	6.0	8.0 ✓	8.0	9.8
56537	EV	153	AG	V1L417	20060227	9.0	10.0	10.0	9.9
53555	PK	153	AG	V1L417	20060301	8.0	9.0	8.0	4.0
53560	SR	153	AG	V1L417	20060309	8.0	9.0	9.0	9.9
58306	PK	153	AG	V1L417	20060405	8.0	8.0 ✓	8.0	9.9
58293	LZ	153	AG	V1L417	20060405	7.0	8.0 ✓	9.0	9.8
53562	SR	153	AG	V1L417	20060406	8.0	9.0	9.0	9.9
58279	EV	153	AG	V1L417	20060416	9.0	10.0	8.0	9.9
58281	EV	153	AC	V1L417	20070110	8.0	10.0 ✓	8.0	9.9
59302	LZ	153	AC	V1L417	20070124	7.0	8.0 ✓	8.0	9.8
59313	PK	153	AC	V1L417	20070505	8.0	9.0	9.0	9.9
61863	SR	153	AC	V1L417	20070708	7.0	9.0	8.0	9.9
63268	LZ	153	AC	V1L417	20071020	7.0	8.0 ✓	9.0	9.9
64141	EV	153	AC	V1L417	20071208	8.0	10.0	9.0	9.9
63269	LZ	153	AC	V1L417	20071218	7.0	9.0	9.0	9.7
64179	SR	153	AC	V1L417	20080116	8.0	8.0 ✓	8.0	9.9
64142	EV	153	OC	V1L417	20080510	8.0	9.0	9.0	9.9
64180	SR	153	AC	V1L417	20080521	7.0	9.0	9.0	9.8
67312	LZ	153	OC	V1L417	20080717	6.0	9.0	8.0	9.9
67313	LZ	153	AC	V1L417	20080720	8.0	9.0	9.0	9.9
58920	PK	155	AC	V1L417	20060811	8.0	9.0	9.0	9.9

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